

REMARKS

In accordance with the foregoing claims 1-39 are pending and under consideration. No new matter is presented in this Amendment.

REJECTIONS UNDER 35 U.S.C. §101:

Claims 30-34 are rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter.

The Examiner rejected claims 30-34 because the computer-readable medium recited in the claims includes carrier waves. Although persons of ordinary skill in the art consider that a carrier wave can operate as a recording medium, it appears that the USPTO has withdrawn the "carrier wave" from the examples of recording media which were originally included in the guide lines related to computer related inventions. However, the USPTO readily grants patents where the invention is expressed as "a data signal embodied in a carrier wave comprising a program." Recent examples of such grants include U.S. Patents 6,985,411, 6,975,929, 6,898,160, and 7,0456,684. The specification has been amended so that claims 30-34 do not literally read on a carrier wave and language relating to the embodiment of the invention as a "data signal embodied in a carrier wave comprising a program" language has been included.

REJECTIONS UNDER 35 U.S.C. §112:

Claims 1-39 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The applicant respectfully traverses.

The Examiner argues that because of the significant difference between the disc size disclosed by the applicant, and the disc size known in the prior art, it would require undue experimentation for one of ordinary skill to make and/or use the invention.

Although the applicant provided a prior art reference, the Fox article, the Examiner did not consider the disclosure contained within the reference on the grounds that Fox merely disclosed "secret" research. Secret research, according to the examiner, "is not an indication that one of ordinary skill in the art would have been familiar with the technology." However, even if the research was "secret" prior to the publication of the Fox reference, it certainly ceased to be

secret when the Fox reference was published. Further, Fox reports that Philips demonstrated the small form factor optical disks in Japan a week prior to the publication of the article. Thus, at the time the invention was made, discs of a size on the order of those disclosed in the specification was known to a person of ordinary skill in the art.

The Examiner next argues that because the size disclosed in the Fox article (34 mm diameter, or 17 mm outer circumference) is not either of the sizes disclosed in the specification (22.5 mm outer radius or 14 mm outer radius), a person of ordinary skill would have required undue experimentation to make discs of the disclosed size.

However, the test of enablement is not whether any experimentation is necessary, but whether, if experimentation is necessary, it is undue. Standard optical discs have a diameter of 12 cm (and thus a corresponding radius of 6 cm, or 60 mm), and minidisks have a diameter of 8 cm (and thus a corresponding radius of 40 mm). Even assuming that it would have required undue experimentation to derive a disc of the sizes given in the specification from the standard and minidisk sizes, it would not have required undue experimentation to derive a disc of the sizes given in the specification from the size given in the Fox article. The difference between the minidisk outer radius, 40 mm, and the largest outer radius given in the specification, 22.5 mm, is 17.5 mm. However, the difference between the outer radius of the disc described in the Fox article, 17 mm, and the outer radii of the discs given in the specification, 14 mm and 22.5 mm, are 3 mm and 5.5 mm. A difference of 5.5 mm is well within the range of reasonable experimentation. In light of the slight difference between the size disclosed in the Fox article and the sizes disclosed in the specification, the Examiner has failed to provide any evidence that the amount of experimentation required to derive a disc of the radii claimed in claim 6 based on the 17 mm radius disclosed in the Fox article is undue.

Claims 1-39 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant respectfully traverses.

The Examiner objected to the limitation "based upon" and "in consideration of" a value obtained by dividing the outermost circumference of a disc-type recording medium by the innermost circumference of the disc-type recording medium. The terms "based upon" and "in consideration of" are well-known terms; for example, 364,428 issued patents have claims using

"based upon", and 4,301 patents have claims using "in consideration of". As used in the present application, this terminology clearly indicates that the lengths of the other patterns are not fixed, as indicated in the prior art, but rather depend in some fashion on the ratio. The specification provides an example of a way in which the pattern length is based upon the ratio at paragraph 26. Although the terminology used in the claims is broad, and is not limited to precise formula given in paragraph 26, breadth is not indefiniteness. See MPEP § 2173.04.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.


Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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